AMENDMENTS TO THE CLAIMS

The following is a complete, marked up listing of revised claims with a status identifier in parentheses, underlined text indicating insertions, and strikethrough and/or double-bracketed text indicating deletions.

LISTING OF CLAIMS

1. (Currently Amended) A recording medium storing a data structure for managing reproduction of at least video data having multiple reproduction paths ~~recorded on the recording medium~~ by a reproducing apparatus, comprising:

one or more navigation management file for managing reproduction of the video data having multiple reproduction paths, the video data being stored in at least one clip file, each navigation management file associated with [[each]] one of the clip [[file]] files, each clip file of the multiple reproduction paths being associated with one of the multiple reproduction paths, said navigation management file including at least one entry point map, the entry point map mapping a presentation time stamp to an address for a corresponding entry point [[of]] in the video data, each entry point map for identifying entry points in the video data for the associated reproduction path, the entry point map having angle change information associated with the entry point,

wherein said angle change information indicates whether an angle change is permitted or not, and

the angle change information further indicates where the angle change is permitted, the angle change from a current angle to a requested angle is performed if the angle change is permitted, and the current angle is maintained until a position at which exit of the current angle is permitted and the angle is changed automatically from the current angle to the requested angle.

2. (Cancelled)

3. (Cancelled)

4. (Previously Presented) The recording medium of claim 1, wherein the angle change information corresponds to each of a plurality of video data blocks, each video data block including at least one entry point, said navigation management file includes a start point of a presentation time stamp, said start point of a presentation time stamp is corresponding to one of said plurality of video data blocks.

5. (Previously Presented) The recording medium of claim 1, wherein said navigation management file includes source packet identification information for a corresponding one of plurality of video data blocks including at least one entry point.

6. (Cancelled)

7. (Previously Presented) The recording medium of claim 1, wherein said navigation management file includes an indicator for indicating a stream type information of the video data.

8. (Previously Presented) The recording medium of claim 1, wherein said navigation management file includes offset information regarding I-picture pointing to an address of a last I-picture contained.

9. (Cancelled)

10. (Cancelled)

11. (Cancelled)

12. (Previously Presented) The recording medium of claim 1, wherein said angle change information corresponds to each of a plurality of video data blocks and the angle change information includes the address of the last interleaved video unit in the corresponding video data block, each video data block including at least one entry point.

13. (Cancelled)

14. (Cancelled)

15. (Cancelled)

16. (Currently Amended) A method of recording a data structure for managing reproduction of at least video data having multiple reproduction paths on a recording medium, comprising:

generating navigation management file for managing reproduction of the video data~~, stored in at least one clip file,~~ having multiple reproduction paths, the video data being stored in at least one clip file, each navigation management file associated with [[each]] one of the clip [[file]] files, each clip file of the multiple reproduction paths being associated with [[on]] one of the multiple reproduction paths, said navigation management file including at least one entry point map, the entry point map mapping a presentation time stamp to an address for a corresponding entry point [[of]] in the video data, each entry point map for identifying entry points in the video data for the associated reproduction path, the entry point map having angle change information associated with the entry point,

wherein said angle change information indicates whether an angle change is permitted or not, and

said angle change information further indicates where an angle change is permitted, the angle change from a current angle to a requested angle is performed if the angle change is permitted and the current angle is maintained until a position at which exit of the current angle is permitted and the angle is changed automatically from the current angle to the requested angle; and

recording the navigation management file [[in]] on the recording medium.

17. (Currently Amended) A method of reproducing a data structure for managing reproduction of at least video data having multiple reproduction paths recorded on a recording medium, comprising:

reproducing navigation management file from the recording medium, the navigation management file for managing reproduction of the video data~~, stored in at least one clip file,~~ having multiple reproduction paths, the video data being stored in at least one clip file, each navigation management file associated with [[each]] one of the clip [[file]] files, each clip file of the multiple reproduction paths being associated with one of the multiple reproduction paths, said navigation management file including at least one entry point map, the entry point map mapping a presentation time stamp to an address for a corresponding entry point [[of]] in the video data, each entry point map for identifying entry points in the video data for the associated reproduction path, the entry point map having angle change information associated with the entry point,

wherein said angle change information indicates whether an angle change is permitted or not, and

said angle change information further indicates where an angle change is permitted; and

controlling reproduction of the video data having multiple reproduction paths according to the navigation management file, the angle change from a current angle to a requested angle is performed if the angle change is permitted and the current

angle is maintained until a position at which exit of the current angle is permitted and the angle is changed automatically from the current angle to the requested angle.

18. (Currently Amended) An apparatus for recording a data structure for managing reproduction of at least video data having multiple reproduction paths ~~recorded~~ on a recording medium, comprising:

a recording unit configured to record data on the recording medium; and

a controller, operably coupled to the recording unit, configured to control the recording unit to record navigation management file [[in]] on the recording medium, the navigation management file for managing reproduction of the video data~~, stored in at least one clip file,~~ having multiple reproduction paths, the video data being stored in at least one clip file, each navigation management file associated with [[each]] one of the clip [[file]] files, each clip file of the multiple reproduction paths being associated with one of the multiple reproduction paths, said navigation management file including at least one entry point map, the entry point map mapping a presentation time stamp to an address for a corresponding entry point [[of]] in the video data, each entry point map for identifying entry points in the video data for the associated reproduction path, the entry point map having angle change information associated with the entry point, wherein

said angle change information indicates whether an angle change is permitted or not, and

said angle change information further indicates where an angle change is permitted,

wherein the angle change from a current angle to a requested angle is performed if the angle change is permitted and the current angle is maintained until a position at which exit of the current angle is permitted and the angle is changed automatically from the current angle to the requested angle.

19. (Currently Amended) An apparatus for reproducing a data structure for managing reproduction of at least video data having multiple reproduction paths recorded on a recording medium, comprising:

a reproducing unit configured to reproduce data recorded on the recording medium; and

a controller, operably coupled to the reproducing unit, configured to control the reproducing unit to reproduce navigation management file from the recording medium, and to control the reproducing unit to reproduce the video data based on the navigation management file,

wherein the navigation management file is for managing reproduction of the video data~~, stored in at least one clip file,~~ having multiple reproduction paths, the video data are stored in at least one clip file, each navigation management file is associated with [[each]] one of the clip [[file]] files, each clip file of the multiple reproduction paths is associated with one of the multiple reproduction paths,

wherein said navigation management file includes at least one entry point map, the entry point map mapping a presentation time stamp to an address for a corresponding entry point [[of]] in the video data, each entry point map for identifying entry points in the video data for the associated reproduction path, the entry point map having angle change information associated with the entry point,

said angle change information indicates whether an angle change is permitted or not, and

said angle change information further indicates where an angle change is permitted,

wherein, the controller is configured to further control the reproducing unit to reproduce a requested angle based on the angle change information if the angle change from a current angle to the requested angle is permitted after reproducing the current angle until a position at which exit of the current angle is permitted and the angle is changed automatically from the current angle to the requested angle.

20. (Previously Presented) The apparatus of claim 18, wherein the angle change information corresponds to each of a plurality of video data blocks, each video data block including at least one entry point, said controller is configured to create the navigation management file based on a reference information received via an interface, the entry point map for accessing the corresponding video block, the entry point map having one or more entry points corresponding to one of said plurality of video data blocks, the video data block including at least one entry point.

21. (Previously Presented) The apparatus of claim 18, said recording unit comprising:

a recording unit including a pickup unit to record the data on the recording medium.

22. (Previously Presented) The apparatus of claim 21, wherein said recording unit further comprises:

an encoder configured to encode at least video data;

a multiplexer configured to multiplex at least video data to create a transport stream according to control information of the controller; and

a packetizer configured to packetize the transport stream from the multiplexer into source packets in accordance with a format of an optical disk, said packetizer is controlled by the controller.

23. (Previously Presented) The apparatus of claim 19, wherein said controller is configured to analyze the angle change information if the angle change is requested via an interface, and control the reproducing unit to selectively change the reproduction path based on the analyzed angle change information, the angle change information including at least one indicator for indicating whether the angle change is permitted or not.

24. (Previously Presented) The apparatus of claim 19, wherein said controller is configured to reference an entry point map within the navigation management file to determine if a request for the angle change is permitted or not, the entry point map including one or more entry points.

25.(Previously Presented) The apparatus of claim 19, wherein said controller is configured to control the reproducing unit to ignore a request for the angle change, if the request for the angle change is not permitted.

26. (Cancelled)

27. (Previously Presented) The method of claim 16, wherein said generating step includes encoding at least video data and multiplexing at least video data to create a transport stream.

28. (Previously Presented) The method of claim 27, wherein said generating step further includes packetizing the transport stream into source packets in accordance with a format of optical disk.

29. (Previously Presented) The method of claim 17, wherein the controlling step includes analyzing the angle change information if the angle change is requested via an interface, and selectively changing the reproduction path based on the analyzed angle change information.

30. (Cancelled)

31. (Previously Presented) The method of claim 17, wherein the controlling step includes ignoring the request for the angle change, if the request for the angle change is not permitted.

32. (Previously Presented) The apparatus of claim 19, wherein the angle change information corresponds to each of a plurality of video data blocks,

the controller is configured to control the reproducing unit to delay the angle change until a reproduction position reaches to the end of the video data block.

33. (Previously Presented) The apparatus of claim 19, further comprises a user interface for receiving the request for the angle change from a user,

wherein the controller operably coupled to the user interface, is configured to perform the angle change based on the received request through the user interface.

34. (Previously Presented) The apparatus of claim 19, wherein the reproducing unit includes a pickup unit to reproduce the data from the recording medium.

35. (Previously Presented) The recording medium of claim 1, wherein the navigation management file is separate from the clip file storing the video data, the clip file and the management file having different file name extensions each other.

36. (Previously Presented) The recording medium of claim 1, further comprising one or more playlist file, the playlist file including at least one playitem, the playitem identifying a playing interval in a reproduction path of the video data, the playitem indicating at least one management file, for associated reproduction path, used by the corresponding playitem, the file name extension of the playlist file being different to the file name extensions of the clip file and the management file.